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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,679	11/20/2003	Hao-Song Kong	MERL-1517	9313
22199 7590 05/31/2007 MITSUBISHI ELECTRIC RESEARCH LABORATORIES, INC. 201 BROADWAY 8TH FLOOR CAMBRIDGE, MA 02139			EXAMINER DANG, DUY M	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 05/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/717,679

Applicant(s)

KONG ET AL.

Examiner

Duy M. Dang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 7-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/20/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. Applicant is informed that the IDS, particularly Form PTO-1449 attached, filed on 11/20/2003 was labeled as "Sheet 1 of 2". This indicates that there were two pages PTO-1149 attached. However, there is no such second page of Form PTO-1449 in the file of record.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-6 are rejected under 35 U.S.C. 102(a) as being anticipated by Kung et al. ("A dynamic error concealment for video transmission over noisy channel", Global Telecommunications Conference, 2002. GLOBECOM '02. IEEE, Publication date: 17-21 November 2002, pages: 1767-1773. Referred as "Kung" hereinafter).

Regarding claim 1, Kung teaches a method for encoding an inter-frame of a compressed video, the inter-frame including a plurality of macroblocks in a predetermined order (see figure 4. Note that the two frames illustrated in figure 4 refers to the so called inter-frames), each macroblock having an associated motion vector (see section B, *Motion vector recovery by side*

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matching, described at page 1171 right column), comprising: identifying, for each current macroblock in the predetermined order, a set of near macroblocks (see figure 2. Note the neighboring blocks i.e., white blocks, of black block and their position i.e., “up down left right” related refers to the so called “predetermined order”. Also refer page 1772 left column 10 lines below equation 10); assigning an index to each near macroblock (i.e., the i and j described in section B, *Motion vector recovery by side matching*, described at page 1171 right column refers to the so called index to each near macroblock); determining a difference between the motion vector of the current macroblock and the motion vector of each near macroblocks (see section B, *Motion vector recovery by side matching*, described at page 1171 right column); sorting the indices of the near macroblocks in order of the differences (see page 1771 right column last paragraph); appending the sorted indices to the inter-frame (see figure 4) .

Regarding claim 2, Kung further teaches the set of near macroblocks are immediately adjacent to the current macroblock (see figure 2 and page 1771 right column last paragraph).

Regarding claim 3, Kung further teaches macroblocks immediately adjacent to the set of near macroblocks are included in the set (see figure 2 and page 1771 right column last paragraph).

Regarding claim 4 Kung further teaches the order is a raster scan order (see page 1772 left column 10 lines below equation 10).

Regarding claim 5 Kung further teaches the difference is in terms of a mean squared error (see section III, MMSE decoding, at page 1770 right column).

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Regarding claim 6 Kung further teaches the difference is in terms of an absolute error (see equation 10 used to calculate SSD as described at page 1772 left column and the SSD refers to the so called "absolute error").

Allowable Subject Matter

5. Claims 7-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter.

Kung does not appear to teach "sorted indices are identified by a separation code in the inter-frame" as recited in claim 7; "transmitting the inter-frame through a noisy channel; decoding the transmitted inter-frame, detecting a lost macroblock in the decoded inter-frame, reading the sorted indices corresponding the lost macroblock, and concealing the lost macroblock by one of the motion vectors identified in the sorted indices" as recited in claim 8; and "macroblocks along edges of the inter-frame are replicated adjacently on an outside of the inter-frame to facilitate processing of edge blocks of the current macroblock" as recited in claim 10.

Claim 9 is allowable as being dependent upon claim 8.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy M. Dang whose telephone number is 571-272-7389. The examiner can normally be reached on Monday to Friday from 6:00AM to 2:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

dmd
5/24/07



DUY M. DANG
PRIMARY EXAMINER